Does the U.S.-China Tariff War Benefit or Hurt the U.S. Textiles and Apparel Industry?

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Background: A large-scale tariff war broke out between the United States and China in mid-2018 triggered by the U.S. concerns over China's unfair trade practices (USTR, 2019). As of January 2019, as much as $260 billion China's exports to the United States and $110 billion U.S. exports to China, including some textile products, were subject to a punitive import tariff ranging from 10 to 25 percent on top of the regular tariff rate (Morrison, 2019). The bilateral tariff war also has raised a heated debate regarding its impacts on the U.S. economy and businesses. Notably, the U.S. textile industry[1] and many domestic apparel manufacturers see Trump Administration's tariff action against China an opportunity for boosting "Made in the USA," whereas others argue that tariff wars had produced no winners in history (NCTO, 2018; AAFA, 2018).

Given the debate and high stakes, the purpose of the study is to evaluate the potential impact of the U.S.-China tariff war on the U.S. textile and apparel (T&A) industry, including manufacturing and trade activities. While existing studies analyzed either the legal or political factors behind the U.S.-China tariff actions against each other or the macroeconomic effects of the trade tensions, the implications of the tariff war on the U.S. T&A industry remains mostly unknown (Rosyadi & Widodo, 2018; Kim, 2019; Morrison, 2019). The findings of the study will fulfill the research gap and significantly enhance our understanding of the T&A specific sectoral impact of the U.S.-China tariff frictions. The results of the study will also help us gain more insights into the state of the U.S. T&A industry in today's interconnected world economy.

Literature review: From a theoretical perspective, the U.S.-China tariff war could affect the U.S. T&A industry in three ways. First, the increased tariff rate will raise the price of T&A sold in the U.S. market, incentivizing U.S. manufacturers to make and supply more T&A due to the production effect of tariff (Krugman and Obstfeld, 2008). Second, a substantial proportion of U.S. textile outputs are sold overseas, particularly in the Western Hemisphere (OTEXA, 2019). However, the tariff war could increase the production cost of "Made in the USA," and result in a decline of U.S. textile exports due to reduced price competitiveness (Madan, 2000). Third, while the tariff war may reduce the U.S. import demand for Chinese goods, the trade diversion effect of the increased tariff may cause U.S. T&A imports from other regions of the world to rise (Rosyadi & Widodo, 2018; Lu, 2019). Thus, the final aggregate demand for T&A "Made in the USA" remains uncertain. With that, this study proposes that: *H1:* the tariff war with China will expand U.S. T&A production. *H2:* the tariff war with China will affect U.S. textile exports negatively. *H3:* the tariff war with China will cause trade diversion and result in an increase of U.S. T&A imports from sources other than China.

[1] In this study, "Textile industry" is defined as the North American Industry Classification System (NAICS) codes 313 and 314. "Apparel industry" is defined as the NAICS code 315.

Method and data: The computable general equilibrium (CGE) model developed by the Global Trade Analysis Project (GTAP) was adopted in this study to test the hypotheses. Compared with a single-equation econometric or the partial equilibrium models, the GTAP CGE method has the advantage of capturing the input-output relationship between T&A and other sectors in the setting of an open global economy and produce more robust results (Dixon & Jorgenson, 2013). Data of the analysis came from the latest GTAP9 database and the World Trade Organization World Tariff Profiles (WTO, 2018). For the study, we categorized the 57 sectors in the database into *Textiles*, *Apparel*, and *Others*. The 140 countries were categorized into *USA, China, Western Hemisphere*, *Asia*, *Europe* and *Rest of the world* (Aguiar, Angel, Narayanan & McDougall, 2016). Further, based on the recent development of the U.S.-China tariff war, we estimated the following three scenarios respectively (USTR, 2019):

- *Scenario 1*: 10% punitive tariff + base year tariff rate in 2017 applied to products traded between the U.S. and China, except T&A
- *Scenario 2*: 10% punitive tariff + base year tariff rate in 2017 applied to products traded between the U.S. and China, including T&A
- *Scenario 3*: 25% punitive tariff + base year tariff rate in 2017 applied to products traded between the U.S. and China, including T&A

Comparing the results in *scenarios 1* & *2* can illustrate both the direct and indirect impacts of the tariff war on the U.S. T&A industry, whereas *scenarios 2 & 3* together can reflect to which extent a full-scale escalated U.S.-China tariff war may affect U.S. T&A production and trade activities (Taheripour & Tyner, 2018).

Results and discussion: First, results of the CGE model estimation overall support *H1* that the tariff war with China will increase the market price for T&A in the United States and consequentially incentivize more production of T&A "Made in the USA." Notably, the annual U.S. T&A production will enjoy the most significant increase in *scenario 3* (up $8,829 million for textiles and $6,044 million for apparel) when the market price of T&A in the United States also correspondingly went up by nearly 1.5% compared with the base year level in 2017. Second, the results of the CGE model also support *H2* and suggest that the tariff war with China will affect U.S. textile exports negatively. This is the case even in *scenario 1* when the tariff war does not target T&A directly, but nevertheless, raises the price of intermediaries for producing textiles in the United States. Further, the results show that the annual U.S. textile exports will suffer the most significant decline in *scenario 3* (down $1,136 million), especially to China and other Asian countries where U.S. textile products are facing intense competition from local suppliers (Lu, 2018). Additionally, results of the CGE model show that in *scenarios 2 & 3*, the trade diversion effect will bring in more apparel imports to the U.S. market from Asian suppliers other than China. Apparently, the tariff war will do little to help U.S. domestic apparel manufacturers reduce the competitive pressure with imports (support *H3*).

Implications and future research agendas: The findings of the study have two important implications. On the one hand, the results confirm that the U.S. T&A industry is a critical stakeholder of the U.S.-China tariff war. Since T&A manufacturing uses inputs from many other sectors, even when the tariff war did not target T&A products directly, the ripple effect of the tariff action may still affect the production and export performance of T&A "Made in the USA." On the other hand, the findings of the study question U.S. T&A industry's overall support for Trump Administration's tariff war with China (NCTO, 2018). Particularly, the tariff war does not seem to well serve the financial interest of the U.S. T&A industry given the expected decline of U.S. textile export and further increase of apparel imports in the U.S. market. To gain more insights into the impact of the U.S.-China tariff war on the T&A sector, future studies can continue to evaluate U.S. T&A firms' export and sourcing strategies at the micro level as well as Chinese T&A firms' shifting production and export behaviors in response to the tariff frictions.

References

Aguiar, Angel, Narayanan, B., & McDougall, R. (2016). An overview of the GTAP 9 database. *Journal of Global Economic Analysis, 1(1),* 181-208.

American Apparel and Footwear Association, AAFA (2018). AAFA testifies on China 301 tariff issue. Retrieved from https://www.aafaglobal.org/AAFA/AAFA_News/2018_Letters_and_Comments/AAFA_Testifies_on_China_301_Tariff_Issue

Dixon, P. B., & Jorgenson, D. W. (2013). *Handbook of computable general equilibrium Modeling*. Waltham, MA: North-Holland.

Kim, M. H. (2019). A real driver of US-China trade conflict: The Sino–US competition for global hegemony and its implications for the future. *International Trade, Politics and Development, 3(1)*, 30-40.

Krugman, P. R., & Obstfeld, M. (2008). *International economics: Theory and policy* (8th ed.) Pearson Education.

Lu, S. (2018). Regional Comprehensive Economic Partnership (RCEP): Impact on the integration of textile and apparel supply chain in the Asia-Pacific region. In Shen, B., Gu, QL., Yang, YX (Eds), *Fashion Supply Chain Management in Asia: Concepts, Models and Cases*. Springer.

Lu, S. (2019). *2019 U.S. Fashion Industry Benchmarking Study*. U.S. Fashion Industry Association, Washington, D.C.

Madan, V. (2000). Endogenous transfer prices, tariffs, and a host country duopoly. The *International Trade Journal*, 14(2), 169-199.

Morrison, Wayne M. (2019). *Enforcing U.S. trade laws: Section 301 and China*. Congressional Research Service. Retrieved from https://crsreports.congress.gov/product/pdf/IF/IF10708

National Council of Textile Organizations, NCTO (2018). *U.S. textile industry calls for china 301 tariffs on textile & apparel end products.* Retrieved from http://www.ncto.org/u-s-textile-industry-calls-for-china-301-tariffs-on-textile-apparel-end-products/

Office of Textiles and Apparel, OTEXA (2019). *U.S. imports of textiles and apparel.* Retrieved from https://otexa.trade.gov/msrpoint.htm

Office of the U.S. Trade Representative, USTR (2019). *2019 U.S. trade policy agenda and 2018 annual report.* Retrieved from https://ustr.gov/sites/default/files/2019_Trade_Policy_Agenda_and_2018_Annual_Report.pdf

Rosyadi, S. A., & Widodo, T. (2018). Impact of Donald Trump's tariff increase against Chinese imports on global economy: Global Trade Analysis Project (GTAP) model. *Journal of Chinese Economic and Business Studies*, *16*(2), 125-145.

Taheripour, F., & Tyner, W. E. (2018). Impacts of Possible Chinese 25% Tariff on US Soybeans and Other Agricultural Commodities. *Choices*, *33*(2), 1-7.

World Trade Organization, WTO (2018). *World trade profile 2018.* Retrieved from https://www.wto.org/english/res_e/booksp_e/tariff_profiles18_e.pdf